



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No.:	10/733,689	Att'y Docket:	EH-10964 (03-434)
Filing Date:	December 11, 2003	Conf No.:	8978
Inventor(s):	Scott A. Flatness et al.	Group Art Unit:	1746
Assignee:	United Technologies Corporation	Examiner:	B. Carrillo
Title:	DETONATIVE CLEANING APPARATUS		

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Reply Brief under 37 CFR 41.41(a)(1)

This Reply Brief is submitted in reply to the Examiner's Answer dated May 5, 2006.

35 USC 112(2) Rejections

Appellants appreciate the withdrawal of the 35 U.S.C. 112(2) rejections. Appellants believe the withdrawal merits further consideration of the on-art rejections below. Specifically, the language which was the subject of the now-withdrawn rejection involves claim limitations relevant to distinguishing the cited art. The on-art rejections should be reversed or at least reconsidered in view of the definite nature of the claim limitations. This is discussed further below. Accordingly, reversal or withdrawal from appeal for allowance or issuance of a non-final action in view of the definiteness of the claim limitations is appropriate and requested.

35 USC 102 and 103 Rejections

Anticipation by Ruegg

At §(9)(b) of the Answer it was asserted: "The limitations directed to 'resist upstream infiltration of a contaminant' would inherently be met since Ruegg is performing the same method steps as the instantly claimed invention." As noted above relative to the withdrawn 35 USC 112(2) rejections, this interpretation appears to ignore the claim element of "effective to substantially resist... vessel." This element is a further limitation upon the nature of the

introduction of the pressurized gas. This further limitation has been ignored in the assertion that "Ruegg is performing the same method steps..." As noted previously, the function of the Ruegg air would be limited to purging the conduit into the container and not resisting upstream infiltration of a contaminant.

Regarding dependent claim 16, the Answer asserted "the limitations are inherently met as illustrated by element 30 of Fig. 2 of Ruegg." Appellants note that claim 16 references a location of gas introduction which had, also, previously been asserted as indefinite in the withdrawn rejection. There is no indication that the claim interpretation has been reconsidered in view of the withdrawn indefiniteness rejection. Element 30 of FIG. 2 is clearly at an upstream end of the asserted Ruegg conduit rather than the claimed "gas port in a downstreammost 20% of a flowpath length within the conduit."

Regarding claim 18, the Answer merely identified "refer to paragraph 45." As far as Appellants can determine from this paragraph, the Ruegg purge gas (air) is the same as its oxidizer.

Accordingly, it is seen that the withdrawal of the indefiniteness rejections effectively raises a new issue regarding the Ruegg rejection which may best be considered in a further non-final action.

Unpatentability over Plavnik et al. in view of Ruegg

In the first full paragraph of page 6 of the Answer it was asserted: "In reference to resisting upstream infiltration of contaminants, the limitations are met by Plavnik since Plavnik is performing the same method step of purging. A skilled artisan would reasonably expect purging in the conduit to resist upstream infiltration of contaminants since Plavnik is performing the same method steps." Appellants assume the use of "Plavnik" is intended to identify Plavnik as modified by Ruegg. In either event, the references to same method steps suffer from the same deficiencies noted above in the Ruegg rejection. Specifically, the claim element which had previously been asserted as indefinite acts to impose limitations above and beyond whatever is inherent in a step of introducing air (for unspecified purpose).

Regarding claims 16 and 19, the Answer asserted: "Plavnik teaches different embodiments in which air is introduced along different lengths of conduit. It would have been within the level of the skilled artisan to introduce the gas at a location that is 20% of the flow

path since the embodiments of Figs. 1, 13, and 17 of Plavnik teaches introducing air at various locations along the conduit." This is merely conclusory. The Answer did not identify any reason why one would choose any downstream location as opposed to the upstream location shown. No different circumferential locations were identified. In reference to claim 19, the Answer further asserted: "the limitations are met since the gas travels to various locations within the conduit as it is purging the interior of the conduit." However, claim 19 identifies several limitations. First, claim 19 includes the preposition "at" in the passage "introduced at a plurality of circumferential locations..." This clearly identifies the point of introduction to the conduit. It is unreasonable to interpret this as reading on the Plavnik situation wherein air introduced at a single point upstream ultimately reaches downstream and is, at that downstream longitudinal location, circumferentially diffuse. Second, the claim element of "gas curtain" formation has been ignored and, also, does not reasonably read upon Plavnik.

Regarding claim 20, the same page 6 paragraph merely noted "refer to the teachings of Ruegg. Specifically, one would reasonably expect the gas to be introduced continuously since Ruegg teaches in paragraph 45 that compressed air is sent through the inner pipe 22 via supply line 30." This is a clear error. If this element was found in Ruegg, then claim 20 should have been rejected as anticipated by Ruegg (see unpatentability discussion below). Second, the identification "that compressed air is sent through the inner pipe 22..." does not, without more, inherently imply a continuous introduction. Neither of the references suggest this.

Regarding claims 21 and 22, it was asserted that "it would have been obvious to a skilled artisan to modify the method of Plavnik to include a radial inward velocity and a longitudinal downstream velocity component since one would reasonably expect the helical swirling flow, as illustrated in Fig. 6, to include both a radial and a longitudinal direction. In reference to claim 22, Plavnik teaches a tangential component, as described in col. 5, lines 60-66 and col. 6, lines 1-10." Appellants note that in the particular toroidal configuration of FIG. 6 of Plavnik et al., there does appear to be tangential/downstream components to the air introduced and combined with the fuel. However, there is no suggestion for the introduction of the underlying claims and no suggestion to modify. The toroidal configuration is not properly combined with Ruegg.

Regarding claim 23, that same paragraph at page 7 asserts that "Plavnik teaches introducing an oxidant (air) separately via element 32 (Fig. 1) and a purge gas flow line (Fig. 18, element 304). Ruegg also teaches purging with air via element 42..." This interpretation is

erroneous and a nonsequitur. The claimed distinction is not between the oxidant/oxidizer on the one hand and purge flow on the other. The distinction is between the pressurized gas effective to substantially resist upstream infiltration on the one hand and a purge gas on the other hand. This issue is related to the claim 16 issue in that a purge gas is advantageously introduced relatively upstream whereas the claimed gas used to resist upstream infiltration... may be introduced relatively downstream. The cited figures and passages do not provide the claimed distinction.

Unpatentability over Ruegg

In §(9)(g) at page 7 of the Answer, the language from page 6 characterizing Ruegg is repeated and thus reflects the same errors. It was further asserted that "a skilled artisan would have recognized the advantages of introducing the gas into the conduit at various angles in order to effectively contact all surface areas of the conduit such that contaminants can be removed." Appellants submit that there is no suggestion or citation for this. There is no indication of references of anything other than a single upstream introduction location. For the purge purposes of Ruegg, such instruction may clearly be effective. Modification to provide the claimed introduction is only suggested by hindsight in view of the present teachings.

Response to Argument

The Response to Argument section repeats a number of the errors noted above (e.g., at subsections a, b, e, f, h, and j. These are not revisited.

At subsections c and g, an interpretation is offered asserting that, although Ruegg teaches an air-fuel mixture and air as a purge gas, only the oxygen component of the air is the claimed oxidizer whereas the air is the claimed purge gas. Under this interpretation, the added element of claim 18 is asserted as satisfied. First, this interpretation was not previously clearly articulated, thereby denying Appellants appropriate opportunity to respond. Second, this interpretation is unreasonable and inconsistent with the present specification and how one skilled in the art would so interpret. For example, the present application clearly evidences use of the term oxidizer such as would preclude dissection of the air. See the sentence of the present application: page 8 "A second oxidizer may be in the form of shop air delivered from a central air source 42."

Regarding subsection d, clearly hindsight was involved. However, this may be moot in view of the further interpretation appropriate after the withdrawal of the indefiniteness rejections.

Regarding subsection i, another novel interpretation is offered wherein the main (shockwave) discharge is asserted as a purge flow and then the actual purge flow is asserted as the "gas supplemental." This interpretation has never previously been articulated denying Appellants the required opportunity to respond. Furthermore, the interpretation is unreasonable and inconsistent with how one of ordinary skill in the art would interpret both terms, both generally, and in view of the present specification. It was asserted that "the combination of oxidant and fuel serves as a 'purge flow' since it breaks off and removes (i.e., purges) contaminants from the interior of the conduit." There is no support for this. Clearly, the ultimate combustion products flow and shockwave cleans the interior of the subject vessel. If anything, however, the combustion products would form contaminants rather than purge them.

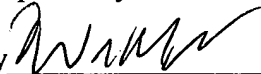
Conclusion

Each of the claims as set forth above clearly contains allowable subject matter. It is respectfully submitted that these rejections are in error.

Reversal of the rejection of these claims is therefore earnestly solicited.

Appellants request that the fee for filing this Reply Brief be charged to Deposit Account No. 21-0279. Please charge any deficiencies or additional fees which may be required hereunder and credit any overpayments to Deposit Account No. 21-0279.

Respectfully submitted,

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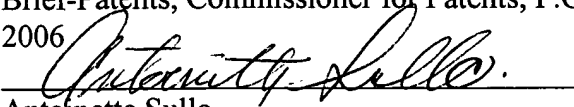
Date: July 5, 2006

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